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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,585	07/16/2001	Yehoshua Yeshurun	YESHURUN-3A	3898
1444	7590	05/31/2005	EXAMINER	
BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303			RUDDOCK, ULA CORINNA	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/904,585

Applicant(s)

YESHURUN ET AL.

Examiner

Ula C. Ruddock

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-31 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 14-31 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendment and accompanying remarks filed March 11, 2005.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

3. Claims 14-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blommer et al. (US 4,989,493) in view of Fischer et al. (US 4,594,290). Blommer et al. disclose a structure for attenuating explosive shock waves to prevent propagation of accidental explosions (abstract). The structure comprises a center sheet of steel surrounded by aluminum, poly methyl methacrylate (PMMA) acrylic plastic, and a rigid foam made from a 50/50 mixture of glass microballoons and a polyurethane resin (col 3, ln 34-40). It should be noted that the Examiner is equating Blommer's aluminum layer to Applicant's rear layer (as shown on page 5 of 6 of present specification) and Blommer's glass microballoons to the glass brittle covering in Applicant's invention. Blommer et al. disclose the claimed invention except for the teaching that the armor layer is slanted oriented relative to the expected trajectory of the oncoming projectile.

Fischer et al. disclose an impact resistant laminate that includes a first ply, which is disposed in the direction of an expected impact (col 1, ln 62-64). The first play can comprise glass or polymethyl methacrylate (col 2, ln 19-20). It would have been obvious to one having ordinary skill in the art to have used Fischer's teaching of disposing the front ply in the direction of an

expected impact on the structure of Blommer et al., motivated by the desire to create an explosion-attenuating device that has increased explosion attenuation.

With regard to claims 24 and 25, it would have been obvious to make the armor layer transparent or opaque, motivated by the desire to create a laminate having a desired aesthetic appearance.

With regard to claims 32 and 33, although the combination of Blommer et al. and Fischer et al. fail to specifically disclose "plates", it is the Examiner's position that it would have been obvious to one having ordinary skill in the art to have made the poly methyl methacrylate (PMMA) acrylic plastic into a plate, motivated by the desire to create a device having increased explosion attenuation. Furthermore, the front surface of Blommer et al. and Fischer et al. is coextensive with the armor layer.

***Rejection is maintained.***

#### ***Response to Arguments***

4. Applicant's arguments filed March 11, 2005, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that the Blommer et al. and Fischer et al. reference are not in the same technical field. This argument is not persuasive because Blommer et al. disclose that the use of laminates (Fischer et al. disclose impact resistant laminates) to attenuate the propagation of projectiles and shrapnel that often accompanies explosions, is well established (col 1, ln 66-68). A bullet can be a projectile. Therefore, it is the Examiner's opinion that these references are analogous. Furthermore, it has been held that the determination that a reference is from a nonanalogous art is twofold. First we decide if the reference is within the field

of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. *In re Wood*, 202 USPQ 171, 174. In this case, both references are within the field of Applicant's endeavor. Applicant further argues that there is no prior art suggestion or evidence to indicate that any purpose would be served by combining the teachings of the references. This argument is also not persuasive because Fischer et al. specifically disclose that disposing the first ply in the direction of an expected impact provide a ballistic response that is unexpectedly high (col 3, ln 21-23) and offer resistance to penetration and spalling from projectiles that is measurably better (col 13, ln 17-21). Applicant further argues that if the teachings of the references were combined, the resulting structure would not be one in which an armor layer of plate is slantingly oriented relative to the expected trajectory of the oncoming projectile and constitutes means for deflecting the projectile from its original course. This argument is not persuasive because the Examiner is equating Fischer's teaching of disposing the first ply in the direction of an expected impact to Applicant's armor layer that is slantingly oriented relative to the expected trajectory of the oncoming projectile. It should be noted that Applicant, in the claims, fails to define a particular angle for their "slantingly oriented" armor layer. Finally, the Examiner believes that an object that has a first ply in the direction of an expected impact would serve to deflect or divert a projectile, not only by the angle in which the ply is disposed, but also by the materials used in the entire structure. Applicant also argues that neither applied reference discloses a plate made of PMMA or epoxy resin. While this may be true, it would have been a well-known design choice in the industry, to have used plates in

the laminate because it allows the article to have enhanced flexibility. Therefore, the rejections have been maintained.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR *UCR*

*Ula Ruddock*  
**Ula C. Ruddock**  
Primary Examiner  
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